

### REMARKS/ARGUMENTS

This is a Response to the Final Office Action mailed November 29, 2006, in which a three (3) month Shortened Statutory Period for Response was set and which expired February 28, 2007. Attached is an electronic fee transmittal with the requisite fee to cover the fee for a one-month extension of time, to March 29, 2007. Twenty-three (23) claims, including two (2) independent claims, were paid for in the application. Claims 2-21, 24-25, 28, and 37 were canceled by the Applicants in their October 9, 2006, response to the Office Action of July 7, 2006. No fee for additional claims is due by way of this Amendment. The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090. Upon entry of the amendments herewith, claims 1, 22-23, 26-27, 29-36, and 38-42 remain pending.

Applicants respectfully request that future correspondence from the U.S. Patent Office identify the present application with the docket number **891050.401**.

#### 1. Acknowledgement of Applicants' Response to the Non-Final Office Action

In the present Final Office Action, the pending claims no longer stand rejected under 35 U.S.C. § 102 as allegedly anticipated by *Sakai et al.* (U.S. Patent 5,423,239), hereinafter *Sakai*, or 35 U.S.C. § 103 as being obvious under *Sakai*. Applicants thank the Examiner for his reconsideration and withdrawal of the rejection under *Sakai*.

In the Final Office Action, the pending claims no longer stand rejected under the judicially created doctrine of obviousness-type double patenting as being obvious over U.S. Patent 7,004,228. Applicants thank the Examiner for his reconsideration and withdrawal of the obviousness-type double patenting rejection.

#### 2. Rejections Under 35 U.S.C. § 102(a) or Under 35 U.S.C. § 103(a) Using *Murao*

In the Final Office Action, at paragraph 3, claims 1, 22-23, 26-27, 29-36, and 38-42 stand rejected under 35 U.S.C. § 102(a) as allegedly anticipated by *Murao et al.* (U.S. Patent

5,827,599), hereinafter *Murao*, or, in the alternative, under 35 U.S.C. § 103(a) as obvious over *Murao*. For a proper rejection of a claim under 35 U.S.C. § 102, the cited reference must disclose all elements and/or features of the claim. See, e.g., *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 7 USPQ2d 1129 (Fed. Cir. 1988). Further, it is well-established at law that, for a proper rejection of a claim under 35 U.S.C. § 103 as being obvious based upon a combination of references, the cited combination of references must disclose, teach, or suggest, either implicitly or explicitly, all elements and/or features of the claim at issue. See, e.g., *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981).

a. Claim 1

Applicants respectfully submit that independent claim 1 is allowable for at least the reason that *Murao* does not disclose, teach, or suggest at least the feature of a magnetic tape “wherein the irregular raised and depressed pattern of the cut surface on the side of the upper blade and the first and second irregular raised and depressed patterns of the cut surface on the side of the lower blade are reduced when the broken region of the cut surface on the side of the lower blade is 40 % to 65 % of the cut surface on the side of the lower blade,” as recited in claim 1 (emphasis added) for at least the reasons below. Thus, *Murao* does not anticipate claim 1 and the rejection should be withdrawn.

b. Claim 32

Applicants respectfully submit that independent claim 32 is allowable for at least the reason that *Murao* does not disclose, teach, or suggest at least the feature of a magnetic tape “first cut surface including a first sheared region adjacent to the back coat layer, a second sheared region adjacent to the magnetic recording layer, and a broken region between the first sheared region and the second sheared region, the broken region formed by application of the breaking force to the broad magnetic tape, the broken region occupying 40% to 65% of the first cut surface,” as recited in claim 32 (emphasis added) for at least the reasons below. Thus, *Murao* does not anticipate claim 32 and the rejection should be withdrawn.

c. Murao Fails to Disclose a Broken Region

*Murao* does not disclose, teach, or suggest using any type of broken region. *Murao* discloses a recording medium “having a back layer on a surface of a nonmagnetic support opposite to the side of the magnetic layer. FIG. 1 is a typical enlarged view of a section of such the magnetic recording medium obtained by the foregoing cutting process. A magnetic recording medium 1 comprises a magnetic layer 2 provided on one side of a nonmagnetic support 4 and a back layer 3 provided on the other. On the section of the magnetic recording medium, the edge face 5 of the back layer protrudes beyond from the level of the top 6 of the highest protrusion on the nonmagnetic support 4” (column 1, lines 39-49, and Figure 2). Then, *Murao* describes a “method for attaining the specified amount of protrusion from the back layer and the specified Young's modulus of the back layer to be used in the present invention ... . For example, the slitting rate, the depth of engaging, the ratio of circumferential speed of upper blade (male blade) to that of lower blade (female blade), and the continuous working time of the slitting blade may be selected in the slitting by a slitter as shown in FIG. 2” (column 4, lines 3-10, emphasis added). There is *no express disclosure* that there is any type of broken region resulting from the disclosed “slitting” of the magnetic tape in *Murao*.

However, the Non-Final Office Action of July 7, 2006, (hereinafter the “Non-Final Office Action”) at pages 3-4 alleges that the “raised and depressed pattern” illustrated in *Murao* Figure 1 is, apparently, “obvious as a matter of inherency” and is equivalent to the recited “broken region” of claims 1 and/or 32. The Final Office Action at page 6 alleges that in *Murao* “irregular raised and depressed patterned areas appear at item 5 and adjacent item 9, with a second region and have a second irregular raised and depressed pattern appearing above 9 and item 6. ... in **Murao et al** there is a first sheared region adjacent the back coat appears at item 5 and a second [sheared] region adjacent the magnetic recording layer at item 6.” Applicants respectfully traverse the conclusion above for at least the following reasons.

Although *Murao* apparently discloses a first sheared region and a second sheared region, there is *no express disclosure* that there are any smaller raised and depressed patterns of the cut surfaces and that there is any type of broken region between the *Murao* first and second sheared regions. For example, when contrasting *Murao* with the present Specification, it is

apparent that *Murao* Figure 1 illustrates at most a relatively smooth large raised and depressed pattern of the cut surface regions, rather than the smaller irregular raised and depressed pattern of the cut surface of Figure 6. Thus, with respect to at least claim 1, *Murao* Figure 1 fails to illustrate an irregular raised and depressed pattern of the cut surface. Further, it is not clear from *Murao* Figure 1 where the cut surface (or sheared region) transitions to a broken region (if any).

Rather, *Murao* is entirely silent with respect to a “broken region” as recited in claims 1 and/or 32. Also, *Murao* is silent as to the nature of the illustrated “raised and depressed” region of the sliced tape just below the top 6 of the highest protrusion on the nonmagnetic support 4 in *Murao* Figure 2. At most, *Murao* merely illustrates a “raised and depressed” region in Figure 1. To arrive at a conclusion that the small illustrated “raised and depressed” region in Figure 1 is the recited “broken region” of claims 1 and/or 32, the Final Office Action must improperly assume or infer facts not of record.

MPEP § 2136.02 clearly indicates that the “REFERENCE MUST ITSELF CONTAIN THE SUBJECT MATTER RELIED ON IN THE REJECTION” (printed in bold font in the MPEP). *Murao* expressly discloses nothing with respect to a broken region on the magnetic tape. At most, there is only a “raised and depressed pattern” illustrated in *Murao* Figure 1. To infer that the “raised and depressed pattern” illustrated in *Murao* Figure 1 is actually a broken region, the Final Office Action must improperly assume or infer other facts not actually disclosed in *Murao*. Accordingly, the rejection itself is improper, and the rejection to claims 1 and 32 should be withdrawn for at least this reason alone.

MPEP § 706.02(j) indicates that “it is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply. ... It is important that the written record clearly explain the rational for decisions made during prosecution of the application.” To properly communicate the requisite basis for the rejection, the Final Office Action should clearly indicate precisely where the reference allegedly discloses, teaches or suggests the recited feature of the rejected claim. Accordingly, if the next Action maintains the rejection of claims 1 and/or 32 using *Murao* as a reference, Applicants respectfully request that the Action indicate precisely where the *Murao* Specification provides the basis for supporting an allegation that *Murao* discloses,

teaches, or suggests that the “raised and depressed” region allegedly illustrated in *Murao* Figure 1 is the recited “broken region” of claims 1 and/or 32. Alternatively, if claims 1 and/or 32 continue to be rejected based upon information alleged to be well-known, Applicants respectfully request that the Examiner “cite a reference in support of his or her position” or provide an affidavit specifically stating the alleged “facts within the personal knowledge of the examiner” as required under MPEP § 2144.03.

d. *Murao* Fails to Disclose a Broken Region Occupying 40% to 65% of the Cut Surface

As noted above, *Murao* does not disclose that the “raised and depressed” region in Figure 1 is the recited “broken region” of claims 1 and/or 32. Accordingly, *Murao* does not disclose, teach, or suggest at least using any type of broken region that *occupies 40% to 65% of the cut surface*. Furthermore, the illustrated “raised and depressed” region in *Murao* Figure 1 is not illustrated as a region corresponding to 40% to 65% of a cut surface as recited. To infer such a teaching, the Final Office Action must improperly assume or infer other facts not actually disclosed in *Murao*.

Reiterating, MPEP § 2136.02 clearly indicates that the “REFERENCE MUST ITSELF CONTAIN THE SUBJECT MATTER RELIED ON IN THE REJECTION” (printed in bold font in the MPEP). *Murao* discloses nothing with respect to a broken region on the magnetic tape that occupies 40% to 65% of the cut surface (*even if* the “raised and depressed pattern” illustrated in *Murao* Figure 1 is improperly constructed to be a broken region). To infer such a teaching, the Final Office Action must improperly assume or infer other facts not actually disclosed in *Murao*. Accordingly, the rejection itself is improper, and the rejection to claims 1 and 32 should be withdrawn for at least this reason alone.

MPEP § 706.02(j) indicates that “it is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply. ... It is important that the written record clearly explain the rationale for decisions made during prosecution of the application.” To properly communicate the requisite basis for the rejection, the Final Office Action should clearly indicate precisely

where the reference allegedly discloses, teaches or suggests the recited feature of the rejected claim. Accordingly, if the next Action maintains the rejection of claims 1 and/or 32 using *Murao* as a reference, Applicants respectfully request that the Action indicate precisely where the *Murao* Specification provides the basis for supporting an allegation that *Murao* discloses, teaches, or suggests any type of broken region that occupies 40% to 65% of the cut surface. Alternatively, if claims 1 and/or 32 continue to be rejected based upon information alleged to be well-known, Applicants respectfully request that the Examiner “cite a reference in support of his or her position” or provide an affidavit specifically stating the alleged “facts within the personal knowledge of the examiner” as required under MPEP § 2144.03.

e. Allegation That Recited Features are an Obvious Design Choice is Improper

At page 5, the Final Office Action alleges that “where the only differences between the prior art and claims are recitation of relative dimensions it has long been held that it would be reasonably obvious for one of ordinary skill to routinely optimize the relative dimensions.” Applicants respectfully traverse the use of this “design choice” argument to establish the basis for a *prima facie* case of obviousness. That is, this “design choice” line of reasoning is not appropriate under the circumstances of the instant case for at least the following reasons.

There are *simply no dimensions disclosed anywhere* in *Murao* pertaining to a broken region (because no broken region is disclosed in *Murao*). Therefore, it is not possible for the Final Office Action (or one of ordinary skill in the art) to properly find in *Murao* the requisite difference between any “prior art dimensions” and the recited dimensions of the claims to optimize. That is, there are no relative dimensions in *Murao* to optimize to arrive at the recited dimensions of claims 1 and 32 (a broken region that occupies “40% to 65%” of the cut surface).

Further, to support an allegation that relative dimensions exist in *Murao* requires the Final Office Action to improperly assume or infer other facts not actually disclosed in *Murao*. As noted above, the Final Office Action should cite a reference in support of the position or provide an affidavit specifically stating the alleged “facts within the personal knowledge of the examiner” as required under MPEP § 2144.03. Accordingly, if claims 1 and/or 32 continue to be rejected based upon an allegation of design choice, Applicants respectfully request that the Examiner properly

establish the basis upon which one of skill in the art would know the dimensions that are to be optimized.

f. Claims 22-23, 26-27, 29-31, 36, and 38-42

Because independent claims 1 and 32 are allowable over the cited art of record, dependent claims 22-23, 26-27, and 29-31 (which depend from independent claim 1), and dependent claims 36 and 38-42 (which depend from independent claim 32), are allowable as a matter of law for at least the reason that these dependent claims contain all features/elements of their respective independent base claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, the rejection to these claims should be withdrawn.

3. Rejections Under 35 U.S.C. § 102(a) or 35 U.S.C. § 103(a)

In the Final Office Action, at paragraph 4, claims 1, 22-23, 26-27, 29-33, 35-36, and 38-42 stand rejected under 35 U.S.C. § 102(a) as allegedly anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over any one of *Iida et al.* (U.S. Patent 6,627,334), hereinafter *Iida*, or JA 09-153212, or JA 11-296839.

a. Claim 1

Applicants respectfully submit that independent claim 1 is allowable for at least the reason that *Iida*, JA 09-153212, or JA 11-296839 do not disclose, teach, or suggest at least the feature of a magnetic tape “wherein the irregular raised and depressed pattern of the cut surface on the side of the upper blade and the first and second irregular raised and depressed patterns of the cut surface on the side of the lower blade are reduced when the broken region of the cut surface on the side of the lower blade is 40 % to 65 % of the cut surface on the side of the lower blade,” as recited in claim 1 (emphasis added) for at least the reasons below. Thus, *Iida*, JA 09-153212, or JA 11-296839 do not anticipate claim 1, and the rejection should be withdrawn.

b. Claim 32

Applicants respectfully submit that independent claim 32 is allowable for at least the reason that *Iida*, JA 09-153212, or JA 11-296839 do not disclose, teach, or suggest at least the feature of a magnetic tape “a first cut surface ... including a first sheared region adjacent to the back coat layer, a second sheared region adjacent to the magnetic recording layer, and a broken region between the first sheared region and the second sheared region, the broken region formed by application of the breaking force to the broad magnetic tape, the broken region occupying 40% to 65% of the first cut surface,” as recited in claim 32 (emphasis added) for at least the reasons below. Thus, *Iida*, JA 09-153212, or JA 11-296839 do not anticipate claim 32, and the rejection should be withdrawn.

c. *Iida* Fails to Disclose a Broken Region, or, a Broken Region Occupying 40% to 65% of the Cut Surface

*Iida* does not disclose, teach, or suggest using any type of broken region. *Iida* discloses a recording medium wherein “FIG. 5 is a perspective view showing a magnetic tape 6, which has been formed by the slitting apparatus shown in FIG. 1 from the magnetic tape web 5” (column 11, lines 12-14). Then, *Iida* describes that “the magnetic tape web 5 is slit by the slitting apparatus described above, the magnetic tapes 6, . . . having the shape described below are obtained. Specifically, as illustrated in FIG. 5, the slit surfaces of each magnetic tape 6 constitute the side face 7 and the side face 8, which extend in the longitudinal direction of the magnetic tape 6. In this embodiment, each of the cutting edge 3a and the cutting edge 4a has the curved shape. Therefore, at the side face 8 on the upper slitting blade side, as in cases where the magnetic tape 6' is obtained from the slitting operation with the conventional cutting edge 3a' and the conventional cutting edge 4a' having the angular shape, the side face of the back coating layer 11 is located more inward than the side face of the base layer 10 by a distance of  $\delta u$  in the width direction of the magnetic tape 6. However, in this embodiment, the advantages over the cases where the magnetic tape 6' is obtained from the slitting operation with the conventional cutting edge 3a' and the conventional cutting edge 4a' having the angular shape are capable of being obtained in that, at the side face 7 on the lower slitting blade side, the side face of the back



coating layer 11 is located more inward than the side face of the base layer 10 by a distance of  $\delta d$  in the width direction of the magnetic tape 6. Accordingly, it is possible to obtain the magnetic tape 6 having the shape such that, at each of the side faces 7 and 8 of the magnetic tape 6, the side face of the back coating layer 11 is located more inward than the side face of the base layer 10 in the width direction of the magnetic tape 6.” (column 11, lines 23-50, emphasis added). There is *no express disclosure* that there is any type of broken region resulting from the disclosed “slitting” of the magnetic tape in *Iida*.

The Final Office Action at page 7 alleges that “in *Iida et al* there is a first sheared region adjacent the back coat appearing at item 11 and a second sheared region adjacent the magnetic recording layer above item 7.” However, the illustrated surface in *Iida* Figure 5 is a smooth and continuous curve that does not illustrate any type of broken region as recited in claims 1 or 32.

Even though *Iida* apparently discloses a first sheared region and a second sheared region, there is *no express disclosure* that there is any type of broken region *between* the *Iida* first and second sheared regions. In fact, *Iida* is *entirely silent* as to the nature of the illustrated “raised and depressed” region of the sliced tape. At most, *Iida* merely illustrates a “raised and depressed” region in Figure 15 (which is not illustrated in Figure 5). To arrive at a conclusion that the “raised and depressed” region in Figures 5 or 15 is the recited “broken region” of claims 1 and/or 32, the Final Office Action must improperly assume or infer facts not of record. Thus, *Iida* does not anticipate claims 1 and/or 32, and the rejection should be withdrawn for at least this reason alone.

Furthermore, the Final Office Action fails to allege that *Iida* discloses any type of *broken region*. Accordingly, the rejection itself is improper since the basis of the rejection is not articulated, and the rejection should be withdrawn for at least this reason alone.

Finally, *Iida* does not disclose, teach, or suggest that the broken region *occupies 40% to 65% of the cut surface*. As noted above, *Iida* discloses nothing with respect to a broken region on the magnetic tape, and therefore, *Iida* clearly discloses nothing with respect to a broken region on the magnetic tape that *occupies 40% to 65%* of the cut surface. Furthermore, such a region (40% to 65%) is clearly not illustrated in *Iida* Figures 5 or 15. To infer such a teaching,

the Final Office Action must improperly assume or infer other facts not actually disclosed in *Iida*. Thus, *Iida* does not anticipate claims 1 and/or 32, and the rejection should be withdrawn for at least this reason alone.

As noted above, Reiterating, MPEP § 2136.02 clearly indicates that the “REFERENCE MUST ITSELF CONTAIN THE SUBJECT MATTER RELIED ON IN THE REJECTION” (printed in bold font in the MPEP). *Murao* discloses nothing with respect to a broken region on the magnetic tape that occupies 40% to 65% of the cut surface (*even if* the “raised and depressed pattern” illustrated in *Murao* Figure 1 is improperly constructed to be a broken region). To infer such a teaching, the Final Office Action must improperly assume or infer other facts not actually disclosed in *Murao*. Accordingly, the rejection itself is improper, and the rejection to claims 1 and 32 should be withdrawn for at least this reason alone.

MPEP § 706.02(j) indicates that, in view of the Applicants’ traversal, and in view of the sound reasoning supporting the traversal, the Examiner should “cite a reference in support of his or her position” or provide an affidavit specifically stating the alleged “facts within the personal knowledge of the examiner” as required under MPEP § 2144.03 in the event the rejections is maintained in the next Action.

d. JA 09-153212 Fails to Disclose a Broken Region, or a Broken Region  
Occupying 40% to 65% of the Cut Surface

JA 09-153212 does not disclose, teach, or suggest using any type of broken region. JA 09-153212 discloses a recording medium wherein “the end face 5 of the back layer at a slit section is so formed as not to project as shown by a dotted line from a reference line 7 in contact with the max. projection part vertex 6 of the nonmagnetic base 4” (Statement of Problem to Be Solved). There is *no express disclosure* that there is any type of broken region in the slit section of the magnetic tape in JA 09-153212.

The Final Office Action at page 7 alleges that JA 09-153212 discloses that “a first irregular raised and depressed patterned area appears at item 5 and adjacent item 9 with a second region, having a second irregular raised and depressed pattern, appearing above and below item 6.”

Although JA 09-153212 apparently discloses a first sheared region and a second sheared region, there is *no express disclosure* that there is any type of broken region *between* the JA 09-153212 first and second sheared regions. In fact, JA 09-153212 is *entirely silent* as to the nature of the illustrated “raised and depressed” region of the sliced tape. At most, JA 09-153212 merely illustrates a “raised and depressed” region in Figure 15. To arrive at a conclusion that the “raised and depressed” region in Figure 1 is the recited “broken region” of claims 1 and/or 32, the Final Office Action must improperly assume or infer facts not of record. Thus, JA 09-153212 does not anticipate claims 1 and/or 32, and the rejection should be withdrawn for at least this reason alone.

Furthermore, the Final Office Action fails to allege that JA 09-153212 discloses any type of broken region. Accordingly, the rejection is improper since the basis of the rejection is not articulated, and the rejection should be withdrawn for at least this reason alone.

Finally, JA 09-153212 does not disclose, teach, or suggest that the broken region *occupies 40% to 65% of the cut surface*. As noted above, JA 09-153212 discloses nothing with respect to a broken region on the magnetic tape, and therefore, JA 09-153212 clearly discloses nothing with respect to a broken region on the magnetic tape that *occupies 40% to 65% of the cut surface*. Furthermore, such a region (40% to 65%) is clearly not illustrated in JA 09-153212 Figures 5 or 15. To infer such a teaching, the Final Office Action must improperly assume or infer other facts not actually disclosed in JA 09-153212. Thus, JA 09-153212 does not anticipate claims 1 and/or 32, and the rejection should be withdrawn for at least this reason alone.

MPEP § 706.02(j) indicates that, in view of the Applicants’ traversal, and in view of the sound reasoning supporting the traversal, the Examiner should “cite a reference in support of his or her position” or provide an affidavit specifically stating the alleged “facts within the personal knowledge of the examiner” as required under MPEP § 2144.03 in the event the rejections is maintained in the next Action.

e. JA 11-296839 Fails to Disclose a Broken Region, or, a Broken Region  
Occupying 40% to 65% of the Cut Surface

JA 11-296839 does not disclose, teach, or suggest using any type of broken region. JA 11-296839 discloses a recording medium with “a peak point 17 which is located upward from the center line of the body 11 in the thickness direction along the slit cross section and is projected to the outside” (Statement of Problem to Be Solved). JA 11-296839 further discloses a recording medium wherein “Drawing 1 shows the slit end face of a back coat layer typically. As shown in the drawing, there is a slit end face of a back coat layer inside the line (datum line ) 18 vertically drawn from the top-most vertices 17 of the curved part which is the slit end face of said base material” (column 11, lines 12-14). Then, JA 11-296839 reemphasizes that “by using this approach, as shown in drawing 1, the slit end face 15 of the back coat layer 14 of the magnetic tape 1 after slit can judge, as it is inside the line 18 (datum line) drawn more nearly vertically from the top-most verticeis of the part which is curved on the outside produced up that the center line 16 of the thickness direction of the base material 11 of this slit cross section” (paragraph 0063). There is *no express disclosure* that there is any type of broken region on the slit end face of the magnetic tape in JA 11-296839.

The Final Office Action at page 6 alleges that in JA 11-296839 there is “a first irregular raised and depressed patterned area appear[ing] at item 15 and adjacent item 16 with a second region, possessing a second irregular raised and depressed pattern, appearing above and below item 17.”

Although JA 11-296839 apparently discloses a first sheared region and a second sheared region, there is *no express disclosure* that there is any type of broken region *between* the JA 11-296839 first and second sheared regions. In fact, JA 11-296839 is *entirely silent* as to the nature of the illustrated “raised and depressed” region of the sliced tape. At most, JA 11-296839 merely illustrates a “raised and depressed” region in Figure 1. To arrive at a conclusion that the “raised and depressed” region in Figure 1 is the recited “broken region” of claims 1 and/or 32, the Final Office Action must improperly assume or infer facts not of record. Thus, JA 11-296839 does not anticipate claims 1 and/or 32, and the rejection should be withdrawn for at least this reason alone.

Furthermore, the Final Office Action fails to allege that JA 11-296839 discloses any type of broken region. Accordingly, the rejection is improper since the basis of the rejection is not articulated, and the rejection should be withdrawn for at least this reason alone.

Finally, JA 11-296839 does not disclose, teach, or suggest that the broken region *occupies 40% to 65% of the cut surface*. As noted above, JA 11-296839 discloses nothing with respect to a broken region on the magnetic tape, and therefore, JA 11-296839 clearly discloses nothing with respect to a broken region on the magnetic tape that *occupies 40% to 65% of the cut surface*. Furthermore, such a region (40% to 65%) is clearly not illustrated in JA 11-296839 Figure 1. To infer such a teaching, the Final Office Action must improperly assume or infer other facts not actually disclosed in JA 11-296839. Thus, JA 11-296839 does not anticipate claims 1 and/or 32, and the rejection should be withdrawn for at least this reason alone.

MPEP § 706.02(j) indicates that, in view of the Applicants' traversal, and in view of the sound reasoning supporting the traversal, the Examiner should "cite a reference in support of his or her position" or provide an affidavit specifically stating the alleged "facts within the personal knowledge of the examiner" as required under MPEP § 2144.03 in the event the rejections is maintained in the next Action.

f. Combination of *Iida*, JA 09-153212, or JA 11-296839

Although the Final Office Action does not expressly articulate the basis of the rejection under 35 U.S.C. § 103(a) as obvious over any one of *Iida*, JA 09-153212, or JA 11-296839, the combination of references should be considered when responding to the Final Office Action. Applicants provide the remarks below regarding any such proposed combination of *Iida*, JA 09-153212, and/or JA 11-296839.

Claims 1 and 32 are allowable for at least the reason that the proposed combination of *Iida*, JA 09-153212, or JA 11-296839 does not disclose, teach, or suggest at least the feature of "wherein the irregular raised and depressed pattern of the cut surface on the side of the upper blade and the first and second irregular raised and depressed patterns of the cut surface on the side of the lower blade are reduced when the broken region of the cut surface on the side of the lower blade is 40 % to 65 % of the cut surface on the side of the lower blade," as

recited in claim 1 (emphasis added), or the feature of a “a first cut surface ... including a first sheared region adjacent to the back coat layer, a second sheared region adjacent to the magnetic recording layer, and a broken region between the first sheared region and the second sheared region, the broken region formed by application of the breaking force to the broad magnetic tape, the broken region occupying 40% to 65% of the first cut surface,” as recited in claim 32 (emphasis added).

As noted above, *Iida* does not disclose, teach, or suggest the above-recited features of either claim 1 or claim 32, namely, a broken region occupying 40% to 65% of the cut surface. Thus, *Iida* fails to disclose, teach or suggest every element of the Applicants’ claimed invention.

As noted above, JA 09-153212 also fails to disclose, teach or suggest the above-recited features of either claim 1 or claim 32, namely, a broken region occupying 40% to 65% of the cut surface. Thus, JA 09-153212 fails to disclose, teach, or suggest every element of the Applicants’ claimed invention.

As noted above, JA 11-296839 also fails to disclose, teach or suggest the above-recited features of either claim 1 or claim 32, namely, a broken region occupying 40% to 65% of the cut surface. Thus, JA 11-296839 fails to disclose, teach, or suggest every element of the Applicants’ claimed invention.

Accordingly, the proposed combination of *Iida*, JA 09-153212, and/or JA 11-296839 does not disclose at least the above-recited features of either claim 1 or claim 32. Therefore, a *prima facie* case establishing an obviousness rejection by *Iida*, JA 09-153212, and/or JA 11-296839 has not been made. Thus, claims 1 and 32 are not obvious under the proposed combination of *Iida*, JA 09-153212, and/or JA 11-296839, and the rejection should be withdrawn.

g. Claims 22-23, 26-27, 29-31, 33, 35-36, and 38-42

Because independent claims 1 and 32 are allowable over the cited art of record, dependent claims 22-23, 26-27, and 29-31 (which depend from independent claim 1), and dependent claims 33, 35-36, and 38-42 (which depend from independent claim 32), are allowable

as a matter of law for at least the reason that these dependent claims contain all features/elements of their respective independent base claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, the rejection to these claims should be withdrawn.

4. Hindsight Argument

As noted in the Applicants' Amendment made in response to the Non-Final Office Action, the Applicants asserted that the references "clearly fail to teach or suggest the close relationship between the relative ratio of the broken region and the size of an irregular raised and depressed pattern or the influence of the relative ratio of the broken region to the amount of the peeled and/or dropped part of the broken surface, there should be an impermissible hindsight." The Final Office Action simply responds that "no where has applicants pointed out precisely where the examiner included knowledge gleaned only from applicant's disclosure" (page 8 of the Final Office Action). Applicants respectfully traverse this response to the Applicants' arguments for at least the following reasons.

Applicants did point out what the Non-Final Office Action was improperly gleaned from the Applicants' disclosure, namely the "broken region of the cut surface on the side of the lower blade is 40 % to 65 % of the cut surface on the side of the lower blade" as recited in claim 1 and the "broken region occupying 40% to 65% of the first cut surface" as recited in claim 32 (emphasis added). Nowhere in any of the cited art is there any disclosure of a broken region occupying 40% to 65%.

At issue with respect to the Applicants' allegation of improper hindsight, where else is the Examiner to arrive at disclosure of recited features which are, in fact, not disclosed anywhere in the cited art? MPEP § 2142 requires that "to reach a proper determination under 35 U.S.C. § 103, the examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention 'as a whole' would have been obvious at that time to that person. Knowledge of applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the 'differences,' conduct the search and evaluate the 'subject matter

as a whole' of the invention. *The tendency to resort to 'hindsight' based upon applicant's disclosure* is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art" (emphasis added).

Here, the Final Office Action must use the Applicants' specification to establish its basis for the rejection under 35 U.S.C. § 103(a), namely, a broken region occupying 40% to 65% of the cut surface (since none of the cited art discloses the above-identified feature, or any other type of range associated with a broken surface). Using the Applicants' specification to establish a basis for rejection is improper, and for at least this reason alone, a *prima facie* case establishing an obviousness rejection has not been properly made in the Final Office Action. Accordingly, the rejection should be withdrawn.

#### 5. Clarification of the Applicants' Arguments in the Response to the Non-Final Office Action

The Final Office Action at page 4 asserts that "applicants have acknowledged the prior art shapes do seem similar to what has been claimed as a result of 40-65% or 50-60% of the lower blade by comparing the profile obtained in the prior art (paragraph bridging pages 8 and 9 – Remarks Filed on 10/09/06)." Applicants respectfully traverse the above-statement of the Final Office Action because the statement above, when taken alone, may be taken out of context and thereby cause a mischaracterization of the Applicants' statements.

Applicants, in their Amendment made in response to the Non-Final Office Action, stated that the recited "cut is actually caused by a shearing force and a breaking force. More specifically, the relative ratio of the broken region has close relationship with the size of an irregular raised and depressed pattern of the cut surface. ... However, what cited references disclose is just a shape that is seemingly similar to the irregular raised and depressed pattern of the present invention, thus, it is clear that they do not disclose the limitation to the ratio of the broken region." Applicants then stated that, "regarding the shape of the raised and depressed pattern, the cited references may disclose a raised and depressed pattern of the cut surface that is similar to the present invention in view of the shape. However, what cited references disclose is just a shape that is seemingly similar to the irregular raised and depressed pattern of the present



invention, thus, it is clear that they do not disclose the limitation to the ratio of the broken region” (page 8 of Applicants’ Amendment made in response to the Non-Final Office Action, emphasis added).

The Applicants further stated that “if any numerical limitation to the ratio of the broken region in the cut surface is attempted to be read from the cited references, they clearly fail to teach or suggest the close relationship between the relative ratio of the broken region and the size of an irregular raised and depressed pattern or the influence of the relative ratio of the broken region to the amount of the peeled and/or dropped part of the broken surface, there should be an impermissible hindsight” (pages 8-9 of Applicants’ Amendment made in response to the Non-Final Office Action, emphasis added).

#### 6. Evidence Supporting Unexpected Results

The Final Office Action at page 5 asserts that no objective evidence has “been submitted for justifying [~~the for~~] the conclusion that reduction of peeling and dropping offs from the tape.” Applicants respectfully submit such evidence as requested by the Examiner, attached hereto as Exhibit A. This evidence rebuts the asserted 35 U.S.C. § 103(a) rejections as obvious over any one of *Murao*, *Iida*, or JA 09-153212, or JA 11-296839. Applicants respectfully request reconsideration of the 35 U.S.C. § 103(a) rejections of the Final Office Action in view of the proffered objective evidence.

#### 7. Obviousness-Type Double Patenting Rejections

The Final Office Action has rejected claims 1, 22-23, 26-27, 29-33, 35-36, and 38-42 under the judicially created doctrine of obviousness-type double patenting as being obvious over copending Application No. 10/802,134 filed by Shoudai, hereinafter *Shoudai*. Applicants respectfully traverse the obviousness-type double patenting rejection under *Shoudai* for at least the following reasons.

a. Two-Way Analysis of Shoudai Claim 1 and Pending Claims 1 and 32

*Shoudai* claim 1 is repeated below:

1. A magnetic tape manufactured by feeding a broad magnetic tape including a broad support, a magnetic recording layer formed on one surface of the broad support and a back coat layer formed on the other surface of the broad support to a portion between a disk-like upper blade and a disk-like lower blade overlapping each other and rotating in opposite directions and cutting it into magnetic tapes each having a predetermined width and in which a position where an irregular raised and depressed pattern of a cut surface of the support on the side of the upper blade becomes locally maximal or a position where an irregular raised and depressed pattern of a cut surface of the support on the side of the lower blade becomes locally maximal satisfies  $40 \leq 100BU/T \leq 70$  or  $40 \leq 100BL/T \leq 70$ , where BU is the distance from the surface of the back coat layer to the position where the irregular raised and depressed pattern of the cut surface of the support on the side of the upper blade becomes locally maximal, BL is the distance from the surface of the back coat layer to the position where the irregular raised and depressed pattern of the cut surface of the support on the side of the lower blade becomes locally maximal and T is the total thickness of the broad magnetic tape and in which a ratio of BU/T to BL/T is equal to or larger than 0.9 and equal to or smaller than 1.1.

In contrast, pending claim 1 recites a magnetic tape “wherein the irregular raised and depressed pattern of the cut surface on the side of the upper blade and the first and second irregular raised and depressed patterns of the cut surface on the side of the lower blade are reduced when the broken region of the cut surface on the side of the lower blade is 40 % to 65 % of the cut surface on the side of the lower blade” (emphasis added). *Shoudai* claim 1 does not recite the features of claim 1, nor could *Shoudai* claim 1 be modified to contain the subject matter of pending claim 1. Furthermore, pending claim 1 does not recite the features of *Shoudai* claim 1, nor could pending claim 1 be modified to contain the subject matter of *Shoudai* claim 1. Accordingly, there is no basis to assert a proper obviousness-type double patenting rejection and the rejection should be withdrawn.

Similarly, pending claim 32 recites a magnetic tape “a first cut surface ... including a first sheared region adjacent to the back coat layer, a second sheared region adjacent to the magnetic recording layer, and a broken region between the first sheared region and the second sheared region, the broken region formed by application of the breaking force to the

broad magnetic tape, the *broken region occupying 40% to 65% of the first cut surface*” (emphasis added). *Shoudai* claim 1 does not recite the features of claim 32, nor could *Shoudai* claim 1 be modified to contain the subject matter of pending claim 32. Furthermore, pending claim 32 does not recite the features of *Shoudai* claim 1, nor could pending claim 32 be modified to contain the subject matter of *Shoudai* claim 1. Accordingly, there is no basis to assert a proper obviousness-type double patenting rejection and the rejection should be withdrawn.

b. Two-Way Analysis of *Shoudai* Claim 14 and Pending Claims 1 and 32

*Shoudai* claim 14 is repeated below:

14. A magnetic tape manufactured by the method comprising feeding a broad magnetic tape including a broad support, a magnetic recording layer formed on a first surface of the broad support, and a back coat layer formed on a second surface of the broad support, to a portion between a disk-like upper blade and a disk-like lower blade overlapping each other and rotating in opposite directions;

cutting the broad magnetic tape into the magnetic tape in which a first position where a first irregular raised and depressed pattern of a first cut surface of the support on the side of the upper blade becomes locally maximal and a second position where a second irregular raised and depressed pattern of a second cut surface of the support on the side of the lower blade becomes locally maximal satisfies  $40 \leq 100\text{BU}/T \leq 70$  and  $40 \leq 100\text{BL}/T \leq 70$ , where BU is a first distance from the surface of the back coat layer to the first position, BL is a second distance from the surface of the back coat layer to the second position, and T is a total thickness of the broad magnetic tape.

In contrast, pending claim 1 recites a magnetic tape “wherein the irregular raised and depressed pattern of the cut surface on the side of the upper blade and the first and second irregular raised and depressed patterns of the cut surface on the side of the lower blade are reduced when the *broken region of the cut surface on the side of the lower blade is 40 % to 65 % of the cut surface on the side of the lower blade*” (emphasis added). *Shoudai* claim 14 does not recite the features of claim 1, nor could *Shoudai* claim 14 be modified to contain the subject matter of pending claim 1. Furthermore, pending claim 1 does not recite the features of *Shoudai* claim 14, nor could pending claim 1 be modified to contain the subject matter of *Shoudai* claim

14. Accordingly, there is no basis to assert a proper obviousness-type double patenting rejection and the rejection should be withdrawn.

Similarly, pending claim 32 recites a magnetic tape “a first cut surface ... including a first sheared region adjacent to the back coat layer, a second sheared region adjacent to the magnetic recording layer, and a broken region between the first sheared region and the second sheared region, the broken region formed by application of the breaking force to the broad magnetic tape, the *broken region occupying 40% to 65%* of the first cut surface” (emphasis added). *Shoudai* claim 14 does not recite the features of claim 32, nor could *Shoudai* claim 14 be modified to contain the subject matter of pending claim 32. Furthermore, pending claim 32 does not recite the features of *Shoudai* claim 14, nor could pending claim 32 be modified to contain the subject matter of *Shoudai* claim 14. Accordingly, there is no basis to assert a proper obviousness-type double patenting rejection and the rejection should be withdrawn.

c. Two-Way Analysis of *Shoudai* Claim 15 and Pending Claims 1 and 32

*Shoudai* claim 15 is repeated below:

15. A magnetic tape manufactured by the method comprising:  
feeding a broad magnetic tape including a broad support, a magnetic recording layer formed on a first surface of the broad support, and a back coat layer formed on a second surface of the broad support, to a portion between a disk-like upper blade and a disk-like lower blade overlapping each other and rotating in opposite directions;

cutting the broad magnetic tape into the magnetic tape in which a first position where a first irregular raised and depressed pattern of a first cut surface of the support on the side of the upper blade becomes locally maximal or a second position where a second irregular raised and depressed pattern of a second cut surface of the support on the side of the lower blade becomes locally maximal satisfies  $40 \leq 100\text{BU}/T \leq 70$  or  $40 \leq 100\text{BL}/T \leq 70$ , where BU is a first distance from the surface of the back coat layer to the first position, BL is a second distance from the surface of the back coat layer to the second position, and T is a total thickness of the broad magnetic tape, and the ratio of BU/T to BL/T is equal to or larger than 0.9 and equal to or smaller than 1.1.

In contrast, pending claim 1 recites a magnetic tape “wherein the irregular raised and depressed pattern of the cut surface on the side of the upper blade and the first and second irregular raised and depressed patterns of the cut surface on the side of the lower blade are reduced when the *broken region of the cut surface on the side of the lower blade is 40 % to 65 % of the cut surface on the side of the lower blade*” (emphasis added). *Shoudai* claim 15 does not recite the features of claim 1, nor could *Shoudai* claim 15 be modified to contain the subject matter of pending claim 1. Furthermore, pending claim 1 does not recite the features of *Shoudai* claim 15, nor could pending claim 1 be modified to contain the subject matter of *Shoudai* claim 15. Accordingly, there is no basis to assert a proper obviousness-type double patenting rejection and the rejection should be withdrawn.

Similarly, pending claim 32 recites a magnetic tape “a first cut surface ... including a first sheared region adjacent to the back coat layer, a second sheared region adjacent to the magnetic recording layer, and a broken region between the first sheared region and the second sheared region, the broken region formed by application of the breaking force to the broad magnetic tape, the *broken region occupying 40% to 65% of the first cut surface*” (emphasis added). *Shoudai* claim 15 does not recite the features of claim 32, nor could *Shoudai* claim 15 be modified to contain the subject matter of pending claim 32. Furthermore, pending claim 32 does not recite the features of *Shoudai* claim 15, nor could pending claim 32 be modified to contain the subject matter of *Shoudai* claim 15. Accordingly, there is no basis to assert a proper obviousness-type double patenting rejection and the rejection should be withdrawn.

d. Two-Way Analysis of *Shoudai* Figures and Pending Application

*Shoudai* Figure 5 completely fails to illustrate the above-recited features of claims 1 or 32, namely any type of broken region. Even though Figure 5 of the pending Application is similar to *Shoudai* Figure 5, the similarity alone is not sufficient to establish the basis necessary for a proper obviousness-type double patenting rejection. Accordingly, the rejection should be withdrawn.

e. Basis of the Obviousness-type Double Patenting Not Articulated in the Final Office Action

Applicants traverse the alleged obviousness-type double patenting for at least the reason that the basis of the obviousness-type double patenting is not articulated in the Final Office Action. The Final Office Action at page 9 merely alleges, without supporting analysis or reasoning, that “the side-by-side comparison of the products illustrated in the instant application and that claims in SN 10/802,134 at Figure 5 ... exhibit a mutual, therefor[e], two way obviousness.” As noted above, the *Shoudai* claims can not be modified to contain the subject matter of the pending claims. The pending claims can not be modified to contain the subject matter of the *Shoudai* claims. And, mere similarity between *Shoudai* Figure 5 and Figure 5 of the pending application (neither of which illustrate the recited features of at least pending claims 1 or 32) is sufficient to properly establish a basis for the obviousness-type double patenting rejection. Accordingly, the rejection should be withdrawn.

However, if the obviousness-type double patenting rejection is maintained, Applicants respectfully request the Examiner’s side-by-side comparison of the *Shoudai* claims and the relevant pending claims, with adequate explanation of the reasoning used to establish the basis of the rejection, so that the Applicants may fairly reply to the obviousness-type double patenting rejection.

8. Claim 34 Not Expressly Rejected in the Final Office Action

The Final Office Action has not expressly rejected claim 34. MPEP § 706.02(j) indicates that “it is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply. ... It is important that the written record clearly explain the rationale for decisions made during prosecution of the application.” Accordingly, if the rejection to claim 34 is maintained, Applicants respectfully request that the next Action specifically reject claim 34.

However, to advance prosecution of the instant case, Applicants offer the following remarks regarding claim 34. Dependent claim 34 (which depends from independent

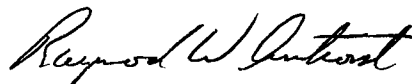
claim 32) is allowable as a matter of law for at least the reason that dependent claim 34 contains all features/elements of independent base claim 32.

9. Conclusion

In light of the above amendments and remarks, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that all pending claims 1, 22-23, 26-27, 29-36, and 38-42 are allowable. Applicants, therefore, respectfully request that the Examiner reconsider this application and timely allow all pending claims. The Examiner is encouraged to contact Mr. Armentrout by telephone to discuss the above and any other distinctions between the claims and the applied references, if desired. If the Examiner notes any informalities in the claims, he is further encouraged to contact Mr. Armentrout by telephone to expediently correct such informalities.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC



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RWA:jr

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Exhibit A

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891050.401 / 874256\_1.DOC

## EXHIBIT A

| Cutting start angle<br>(°)                                      | 5.91                  | 7.23  | 7.29  | 8.32  | 9.34  | 10.23 | 11.45 | 13.21 | 14.46 |
|---|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| First sheared region<br>12 (%)                                  | 42.06                 | 41.50 | 41.87 | 36.74 | 32.18 | 28.86 | 24.52 | 23.22 | 19.95 |
| Broken region 15 (%)  | 36.52                 | 46.32 | 40.17 | 47.63 | 54.13 | 59.46 | 58.99 | 66.57 | 65.17 |
| Second sheared region<br>16 (%)                                 | 21.42                 | 12.18 | 18.16 | 15.63 | 13.68 | 11.68 | 16.5  | 10.21 | 14.89 |
| Protrusion of the<br>back coat layer on<br>the lower blade side | x                     | x     | x     | Δ     | O     | O     | O     | O     | O     |
| Crack in the magnetic<br>layer on the upper<br>blade side       | O                     | O     | O     | O     | O     | O     | Δ     | x     | x     |
| Back coat layer side  | Magnetic surface side |       |       |       |       |       |       |       |       |
| On the upper<br>blade side                                      |                       |       |       |       |       |       |       |       |       |
| Back coat layer side  | Magnetic surface side |       |       |       |       |       |       |       |       |
| On the lower<br>blade side                                      |                       |       |       |       |       |       |       |       |       |

Evaluation of protrusion of the back coat on the lower blade side is based on the extent of peeling and dropping off.

O Good without any problem  
Δ Good with certain problems  
x No good with problems

Evaluation of a crack in the magnetic layer on the upper blade side is based on the extent of dropping off due to the crack.

O Good without any problem  
Δ Good with certain problems  
x No good with problems

Explanation of raised and depressed pattern

The slope of the raised and depressed pattern of the sheared region 12 is large and steep.

The slope of the raised and depressed pattern of the broken region 15 is small and gentle.

